THE WORLD'S GREATEST
ZINC AND
LEAD
DISTRICT
AS SEEN THROUGH THE CAMERA.

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THE WORLD'S GREATEST

ZINC AND LEAD DISTRICT

AS SEEN THROUGH THE CAMERA.

A Concise and Accurate History of Mining in the Missouri-Kansas-Oklahoma-Arkansas District, Together with Varied Resources, Transportation, Manufacturing Facilities and Tables of Total Output of Zinc and Lead Ore, 1830—1907, with an Outline Map of the District.

Containing More than One Hundred Handsome Scenes of Mills, Methods and Machinery Employed in Zinc and Lead Mining, also Street Scenes, Public Buildings, Manufacturing Plants and Residences of Some of the Leading Cities and Towns. : : : : : : : : : :

Published Under the Direction and Supervision of the Publicity Committee, American Mining Congress, at its Tenth Annual Session, Held at Joplin, Missouri, November 11th to 16th, 1907.

MEANS & HEAD, Publishers, JOPLIN, MISSOURI.

PRICE, $1.00.

FRANKLIN HUDSON PRESS, KANSAS CITY.

Zinc and Lead Mining, 1830--1907.

IN THE western foothills of the Ozark Mountains lies the world's greatest zinc and lead mining district.

Prospecting and very shallow surface mining began in Crawford, Moniteau, Morgan and Webster counties of the Southwestern district in the pioneer days of 1830.

Mining operations first began in Jasper County, and that part of the district which now produces the bulk of the ore, about 1850, but only in a desultory (or gophering) sort of way.

Lead ore in those days was carted by ox teams across the almost impassable roads to Boonville, Mo., one hundred and sixty miles distant, which place was the nearest market for the non-precious metal.

In the early days, the value of the Missouri zinc ore not being appreciated, it was thrown upon the dump pile as waste. Lead only was mined.

Zinc was called "black jack" owing to its resemblance to rosin and since then has been known throughout the district as "jack."

Lead mining was prosecuted in about the same manner, all through the fifties and up to 1860.

The total lead output of the entire district up to 1859 was $1,153,-000.00 in value.

During the Civil War, mining was prosecuted spasmodically throughout the district. At the time of General Price's raid several thousand pounds of good Missouri lead were taken by the Confederates from the old Blow Kennett Smelter at Granby, Mo., and used in casting slugs for the old muzzle-loading rifles.

Records exist of active resumption of work at Granby, Mo., in 1865.

In 1870 large discoveries were made about Joplin. The ninth census reports Jasper County's product for the year 1870 at $37,500.00.

The first zinc smelter to be established in Missouri was built by G. Hesselmeyer, at Potosi, Mo., in 1867, and in 1869 the great Carondelet smelter was established in St. Louis.

The Illinois Zinc Company, of La Salle, Ill., soon sent an agent to this field to buy our zinc or "jack."

The first price paid was $3.00 per ton. Sharp competition among ore buyers soon boosted the price to $7.50 per ton; in 1874 zinc ore sold for $10.00 per ton.

The value has increased steadily, year after year, until the early part of 1907, when it sold from $54.00 to $62.50 per ton.

Lead ore sold in the early days for $25 00 to $40 00 per ton and with zinc has steadily advanced in price, and in the early part of 1907 brought $87.00 per ton.

In the early days the depth of the mines scarcely exceeded 80 feet and in most cases was from 20 to 40 feet.

At present shafts are sunk to a depth usually from 160 to 250 feet where richer and better ore is encountered, and while ore in paying quantities is obtained from the 60 to 125 foot level, yet contracts for prospect drilling are now nearly always made for 250 foot holes.

P. L. Crossman, of Joplin, Mo., has sunk several drill holes 2,000 feet or more in depth, and reports that at a depth of from 400 to 600 feet there are still richer deposits than have yet been developed, and that millions of dollars worth of zinc will be taken from deeper levels, when the surface minerals have been mined and turned into money.

The exhaustion of one level no longer marks the end of mineral production. It is only a bid to probe deeper where better and heavier strata or ore deposits are to be encountered.

Until recently zinc and lead mining in this district was confined principally to Southwest Missouri and Southeastern Kansas, but the mining territory is extending and the eager prospector has now followed the veins or deposits over the northern borders of Arkansas and into Oklahoma.

Each year new and valuable territory is developed, at and west of Carl Junction, through Peacock Valley, north of Alba and Neck City, east of Sarcoxie, and south near and into the Quapaw Nation, till now the district comprises Missouri, Kansas Oklahoma and Arkansas.

Larger mills and heavier machinery are required for deep mining.

Fifty to eighty ton mills are of sufficient capacity for shallow mining, whereas in deeper mining, mills of 200, 300, or 500 tons daily capacity are required.

"The Yellow Dog" mill on the Underwriter's land north of Webb City has 1000 tons capacity.

Approximately but five per cent. of the mineral lands of the district have been developed.

With increased prospecting and mining going on at a rapid rate, new and richer strikes being made daily throughout the entire district, from Miami, Oklahoma, on the west, to Aurora, Mo., on the east, and from Neck City, on the north, across the Missouri boundary line to Yellville, Arkansas, on the south; with cheap fuel such as natural gas, coal and oil, and all other natural advantages close at hand; and with unsurpassed transportation facilities, it is not difficult to believe the optimist's claim that Missouri, Kansas, Oklahoma and Arkansas will become the world's greatest mining district.

Capital, from the money centers of the world, is fast seeking investment here and the mines are returning substantial dividends each month.

On another page will be found official tables of the output of given periods from 1830 to 1907.

Welcome!

All business cares are laid aside,
The gates of welcome opened wide.
Distinguished Delegate from afar,
You'll see us now just as we are.
Lead and Zinc mines are our pride,
Coal, Gas and Oil are just outside.
A brief index of what you see
This Souvenir, we think, will be.

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Resources of the District.

SIDE from the lead and zinc deposits which have made the district famous and contributed almost half of the world's supply of these two metals, there are many other resources toward which the attention of the public rarely centers, distracted as it is by the mineral deposits of marvelous richness. On this account, few realize that this mineral territory also is one of the most productive and rich agricultural sections in the country and that the surplus products of this beautiful farming and stock-raising as well as mining country during 1906 amounted to more than $23,000,000.00, ranking this territory as one of the richest anywhere to be found from the standpoint of agriculture, horticulture and stock-raising.

These industries are fostered to a large extent by the fine roadways which permeate every section of this country. This district has spared no labor or expense to make the highways of this section the banner roads of three States. In Jasper County there are 380 miles of roads macadamized with tailings from the mining plants—roads which have led automobilists to declare that they are without equal.

Good roads, however, are not the only benefit we have derived from our tailing piles. Mixed with cement, tailings make the finest concrete walls and building blocks in the world. Some of our best buildings are built out of this cheap and at the same time most serviceable material. No less than half a dozen factories are now manufacturing building blocks from tailings and have found a ready market and built up an important industry.

This source of building material supplements one of the most important industries in the State, one which has its very center in Jasper County. The Carthage quarries, at Carthage, Mo., and those at Meyer's Station, Mo., from which are obtained the famous Carthage stone, furnish one of the most beautiful and desirable building materials known to architecture. This fine pure limestone enters into the structure of many of the most beautiful buildings in Joplin, Carthage, Galena, Webb City and Carterville. It is especially suitable for public buildings and dwellings, and by its superior qualities as a building material has achieved a national reputation. These quarries within the past eighteen years have made this district the main source of supply for all the fine building material used in the surrounding States. Outcrops in other parts of the district occur, but are important chiefly for the manufacture of lime.

Kilns for the manufacture of lime are located at Joplin, Stotts City, Springfeld and Ash Grove, and this has become one of the principal industries. The limestone in this section, being exceptionally pure, makes a high grade of white lime much sought by contractors and builders.

Added to the resources of this section, the abundant timber supply from Arkansas, Louisiana, Oklahoma and Texas, the natural gas at 10 cents per thousand feet, piped from Kansas, have made the Joplin district a Mecca to which have gathered manufacturers from all parts of the country, producing every article useful to civilization.

Candy, wagon, casket and clothing factories, flour mills and kindred industries supply the wants of the average citizen, while numerous foundries, machine shops, the steel and bridge works and dynamite factories fill the particular requirements of the mining interests. The water power of this district has made possible conditions impossible without it.

The Spring River Power Company has thrown a dam across Spring River twelve miles west of Joplin, and collects the waters from a drainage area of 2,500 square miles. The water power generating plant of this company has a capacity of 3,000 K.W., and is supplemented by a steam plant of 2,000 K.W. capacity. The current is transmitted to the various mines of the district over a transmission system thirty miles long. Many of the mills of this section take advantage of the remarkably regular and satisfactory electric service.

The plant of the Consolidated Light, Power and Ice Company, four miles south of Joplin, supplies Joplin, Webb City and Carterville with electric lights. Power is obtained from a dam in connection with Grand Falls, on Shoal Creek, which develops 1,800 H.P. Cities aggregating 80,000 people are served by this company.

Thus, with agricultural resources unequaled by any other in the State, with roadways the acme of thoroughfares, with concrete material superior to any other, and building stone the pride of the State, with easy access to abundant timber and gas supplies, with power sufficient to drive the machinery and light the cities of the whole district, and with lead and zinc deposits superior to all other sections in the world, this lead and zinc field stands as one of the growing and progressive regions upon which the hand of Providence has indeed been lavish.

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Transportation and Manufacturing Facilities.

THE most essential factor in the development of any community is adequate transportation facilities.

Mining in the Joplin district has been greatly augmented not alone by the number of transportation lines serving it, but owing to the fact that each of the lines reaching the district extends to the coal, oil and natural gas fields, thus providing cheap fuel for mining and smelting, quick service and low freight rates on our ores to the fuel districts of Missouri, Kansas and Oklahoma.

The railroads traversing the Joplin district are all trunk lines, each forming a part of the largest systems in the West, and, either with their own rails or in conjunction with their allied connections, provide through freight rates and quick service to practically every market of importance demanding the products of our mines, smelters and factories.

The systems serving the Joplin mining district at present consist of the Frisco—Rock Island, the Missouri Pacific—Iron Mountain, the Missouri, Kansas & Texas and the Kansas City Southern. They reach every camp of importance in the district, provide convenient facilities for prompt switching service and insure the handling of fuel and supplies inbound and ores and products outbound at a minimum expense. These lines traverse a territory extending from the Atlantic to the Pacific and from Canada to the Gulf of Mexico.

The Santa Fe' system and the Missouri & Northern Arkansas railway are now constructing lines into the Zinc-Lead district, and the building of the Bartlesville & St. Louis railway is practically assured.

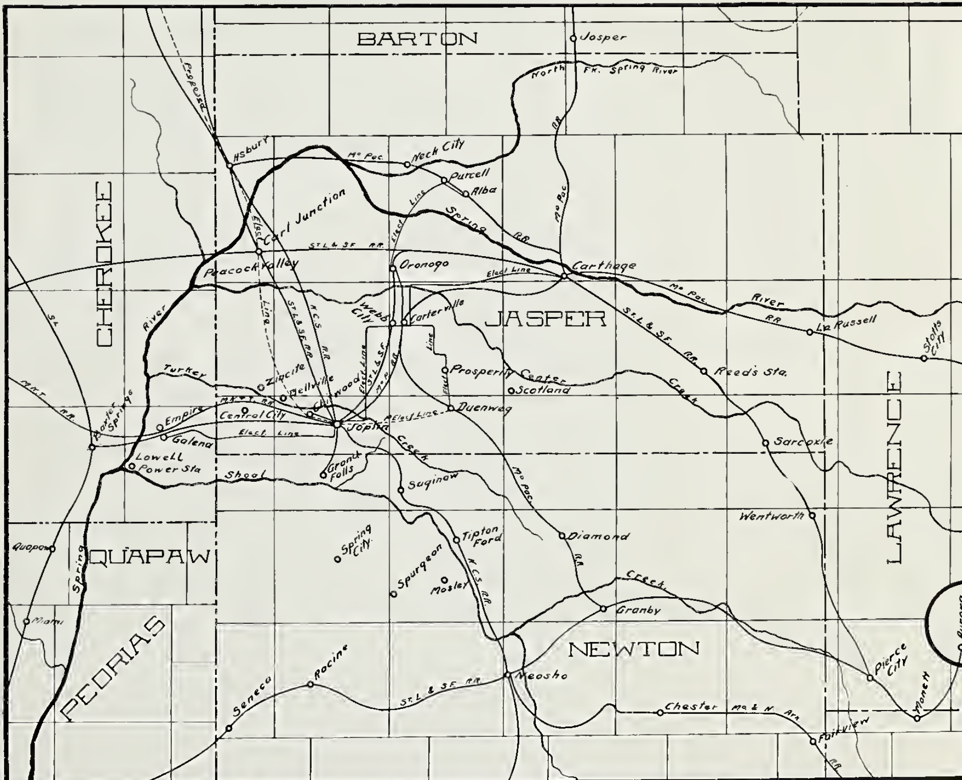
Our transportation lines have always shown a disposition to foster local manufacturing industries by improvements in service and the establishment of equitable freight rates. This has enabled the shippers to compete in distant markets with the products of the mines, smelters and factories and to do an extensive jobbing business to a large and rapidly growing territory.

The Southwest Missouri Electric railroad, with local and interurban service, has approximately sixty miles of line, nearly all of which is double tracked and well ballasted. This company maintains a fifteen minute schedule between Carthage, Carterville, Webb City, Joplin, Mo., and Galena, Kansas, with diverging lines to the Alba, Neck City, Oronogo, Prosperity, Duenweg and Chitwood camps. This provides excellent service for laborers and capitalists alike and quick transportation of supplies to the different parts of the district.

A second interurban electric system, known as the Joplin & Pittsburg line, is now being constructed, and will connect the zinc and lead mining district with Pittsburg, Kansas, and Kansas City, Mo. This line will handle both freight and passenger business.

A very large percentage of the zinc ore produced in the Joplin district is at present being smelted at points in the Kansas and Oklahoma natural gas field. Should the natural gas supply be exhausted, it will have very little effect on the mining operations in the Joplin district, as we will have eight different transportation lines between our mines and the coal fields, but twenty-five miles distant, where thousands of acres of choice smelting coal lands are positively known to exist.

With her excellent transportation facilities and inexhaustable fuel districts adjacent, successful mining operations in the Joplin district are assured for many, many years.



Map Showing the Different Mining Camps and Transportation Lines of the Missouri-Kansas-Indian Territory District.

Tables and Values of Zinc and Lead Ores,

1830--1907.

ORIGINALLY the Southwestern Zinc and Lead mining district comprised twenty counties in Missouri, embracing all of the mineral producing territory south of the Missouri and west of the Gasconade Rivers. These counties were: Barry, Benton, Camden, Christian, Cole, Cooper, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, Miller, Moniteau, Morgan, Newton, Saline, Texas, Webster and Wright. Four of these twenty counties, Crawford, Moniteau, Morgan, and Webster, began drilling in a primitive way about 1830, but very little ore was produced until 1840-45. The total production up to 1850 was less than $100,000 00 of lead. In the early days these twenty counties were known as the Southwestern district. When the Galena mines in the extreme southeastern portion of Kansas, began to produce Galena (or lead ore), in the year 1877, the district became the Missouri-Kansas district.

Since the discoveries in the two reservations, the Miami and the Quapaw Nations in Oklahoma and Northern Arkansas, the whole is now known as the MISSOURI-KANSAS-OKLAHOMA-ARKANSAS mining district. Jasper County, however, is and has been, since 1870, the center of zinc and lead mining. In fact the bulk of the ore produced comes from the mines of Jasper, Newton and Lawrence counties in Missouri, Cherokee County in Kansas, and the Miami and Quapaw reservations of Oklahoma.

From 1850 to 1860 the twenty counties named in Missouri produced $1,069,000.00 of lead. 1860 to 1870 the output of the same counties was $874,000.00. 1870 to 1880 the production was $8,738,666 00 zinc and lead. Of this amount Jasper County, Mo., alone produced $5,896,000.00. Newton County, Mo., $1,500,000.00 and Cherokee County, Kansas, from 1877 to 1880 produced $291,776.00 for their first three years of mining.

1880 to 1893 inclusive the district produced $35,228,348.00. Of this amount Jasper County produced $22,821,000.00; Newton County, $2,585,000.00; Lawrence County, $2,373,808.00 (this being the first period of production for the latter county); and Cherokee County, Kansas, produced $6,983,618.00.

Up to 1890 the record of output was given each 10 years, but since 1890 the reports are given annually. The zinc produced in 1894 was a little more than four and one-half times greater than lead. About the same ratio continued until 1896. In 1906 the output of zinc ore was nearly seven to one of lead.

Below is a complete table of the output of the district 1830-1907, and averages of zinc and lead for the past 13 years. In the following table ore values only are given.

PRODUCTION MISSOURI-KANSAS DISTRICT, 1830 TO 1907, INCLUSIVE.

Up to 1859, inclusive (Lead only)	$ 1,153,000.00
1860 to 1869, inclusive (Lead only)	874,800.00
1870 to 1879, inclusive (Zinc-Lead)	8,737,666.00
1880 to 1889, inclusive (Zinc-Lead)	20,121,862.00
1890 (Zinc-Lead)	3,367,687 00
1891 (Zinc-Lead)	3,840,480.00
1892 (Zinc-Lead)	4,580,787.00
1893 (Zinc Lead)	3,317,632.00
1894 (Zinc-Lead)	3,535,735.00
1895 (Zinc-Lead)	3,775,930.00
1886 (Zinc-Lead)	3,857,355.09
1897 (Zinc-Lead)	4,726.300.00
1898 (Zinc-Lead)	7,119,865.00
1899 (Zinc-Lead)	10,715,305.00
1900 (Zinc-Lead)	7,992,106.00
1901 (Zinc-Lead)	7,971,650.00
1902 (Zinc-Lead)	9,430,890.00
1903 (Zinc-Lead)	9,471,395.00
1904 (Zinc-Lead)	11,487,350.00
1905 (Zinc-Lead)	13,302,800.00
1906 (Zinc-Lead)	15,128 175 00
1907 (Zinc-Lead), (Estimated)	18,500,000 00
Totals	$173,009,770.00

September 24, 1907—This report was this date compiled from Missouri and Kansas State reports up to and including 1889. Later reports are from compilations of Jesse A. Zook. Kansas from 1877 to 1885, inclusive, covers only report of South Side M. & M. Co. Later reports by Haworth, covering Cherokee County.

The following table embraces the shipment of zinc and lead concentrate and their combined values for each of thirteen years:

	Zinc, Tons.	Lead, Tons.	Value.
1906	278,930	39,189	$15,128,175
1905	252,435	31,679	13,302,800
1904	267,240	34,362	11.487,350
1903	234,873	28,656	9,471,395
1902	262,545	31,625	9,430,890
1901	255,088	35,177	7,971,650
1900	248,446	29,132	7,992,106
1899	255,088	23,888	10,715,305
1898	234,455	26,687	7,119,865
1897	177,976	30,105	4.726,300
1896	155,333	27,721	3,857,355
1895	144,487	31,294	3,775,930
1894	147.310	32,190	3,535,735

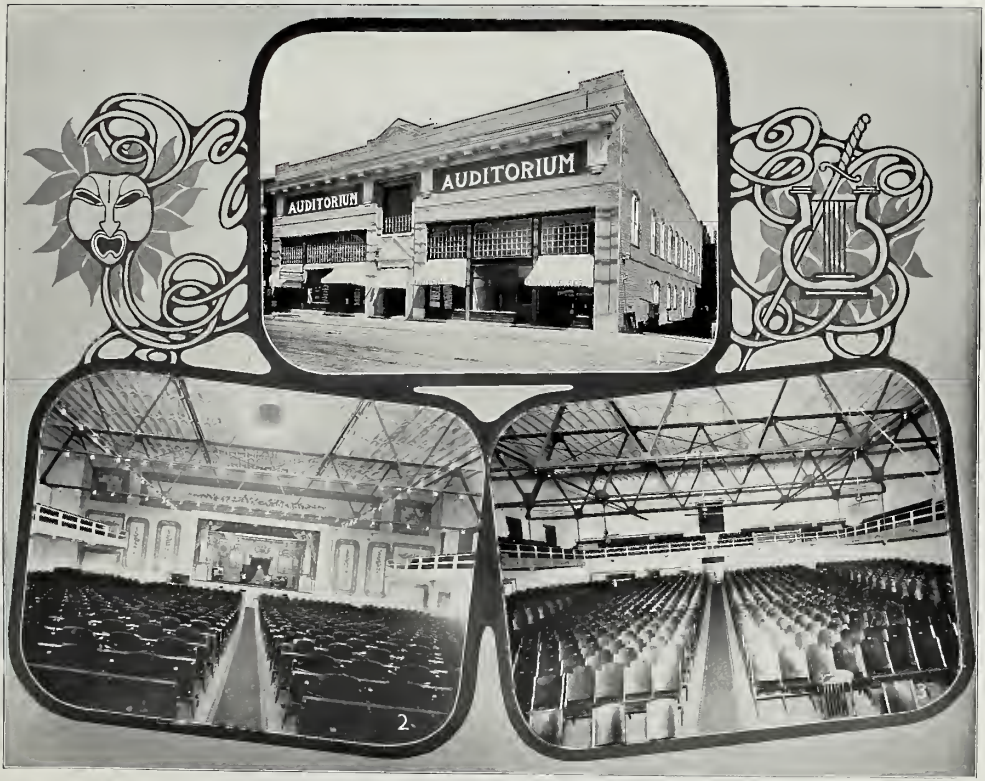
COMMITTEE OF FIFTY, AMERICAN MINING CONGRESS, REPRESENTING THE MISSOURI—KANSAS—INDIAN TERRITORY—ARKANSAS DISTRICT, ASSEMBLED IN THE ROOMS OF THE COMMERCIAL CLUB OF JOPLIN.

H. H. Gregg, Joplin, Mo., Chairman.
Temple Chapman, Webb City, Mo., 1st Vice-Chairman.
J. W. Watson, Baxter Springs, Kan., 2d Vice-Chairman.
T. J. Vest, Galena, Kan., 3d Vice-Chairman.
Thos. W. Cunningham, Joplin, Mo. Treasurer.
Clay Gregory, Joplin, Mo., Secretary.

JOPLIN PUBLIC BUILDINGS.

1. Post Office and Federal Building. 2. City Hall. 3. Elks Club Building. 4. Carnegie Library

SCENES ON FOURTH AND MAIN STREETS, JOPLIN, MO.



NEW AUDITORIUM BUILDING, WHERE AMERICAN MINING CONGRESS WILL BE HELD.

1 Auditorium Building.

2. Looking Toward Stage From Balcony.

3. Looking Toward Balcony From Stage.

1. The Eayre Investment Company Building, Joplin, Mo. 2. Cunningham Building, Owned by L. P. Cunningham, Joplin, Mo. 3. Frisco Building, Owned by L. P. Cunningham, Joplin, Mo.

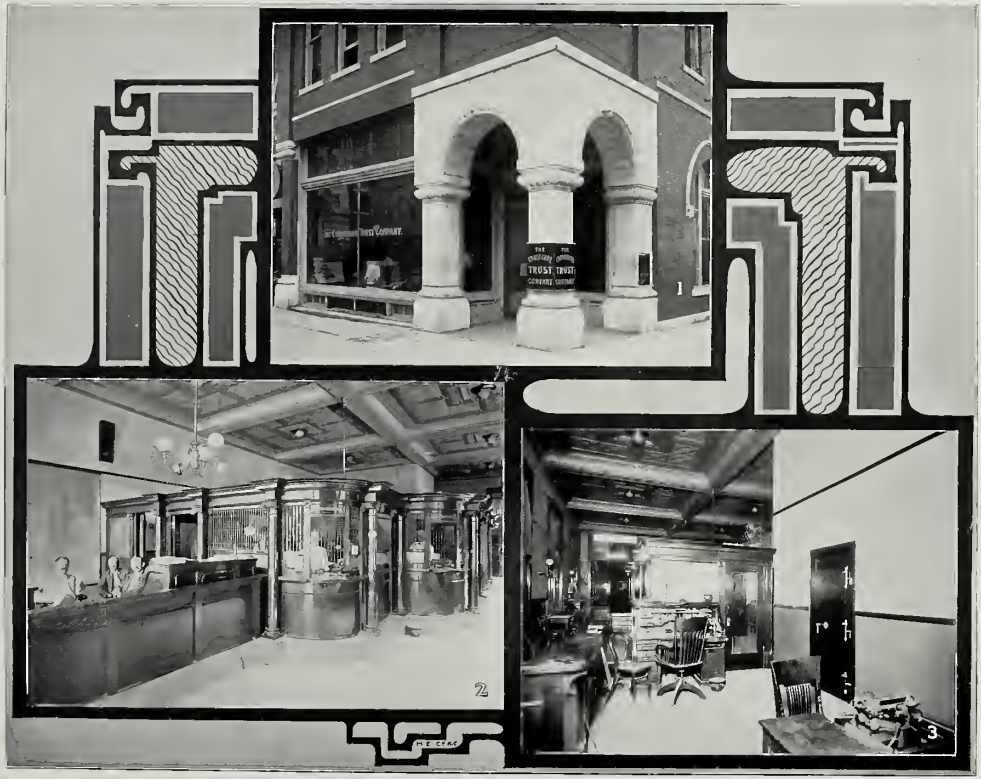
ASSETS OVER ONE MILLION DOLLARS.

Capital	$100,000.00	Directors:	W. A. Campbell, J. F. Dunwoody, Josiah Lanyon,
Surplus	100,000.00		A. H. Rogers, J. W. Ground, A. E. Spencer,
Stockholders' Liability	100,000.00		Wm. Lanyon, J. M. Leonard, A. H. Waite.

ESTABLISHED 1877.

MINERS' BANK, JOPLIN, MO. CAPITAL, 100,000.00; SURPLUS, $50,000.00.

JNO. F. WISE, President. E. O. BARTLETT, 2d Vice-Prest. J. H. SPENCER, Cashier. C. W. BARTLETT, Asst. Cash.
H. C. MURPHY, Vice-Prest. DIRECTORS: J. F. WISE, E. N. PERRY, G. H. YOUNG, HOWARD C. MURPHY, D. C. WISE, EDW. ZELLEKEN, E. O. BARTLETT, CH. GUENGERICH, V. L. YOUNG



THE CONQUEROR TRUST COMPANY.

Authorized Capital, $250,00000..... ..... Fully Paid in Cash, $125,000.00

The Largest Paid-up Capital of Any Financial Institution in Southwest Missouri.

1 Entrance to Bank, Southeast Corner 4th and Joplin Sts. 2. Banking Department. 3. Trust Department.

OLIVIA APARTMENTS, A. E. BENDELARI, OWNER

THE CONNOR.

JOPLIN'S NEW FIREPROOF HOTEL. MADE OF STEEL AND CONCRETE. THE FINEST HOTEL IN THE WEST, FOR ITS SIZE. TO BE OPERATED BY THE CONNOR HOTEL CO.

Main Street, Between 7th and 8th Streets.

THE CLARKETON, S. H. CLARKE, Manager.
Rates $2.50 to $3.50 Per Day.

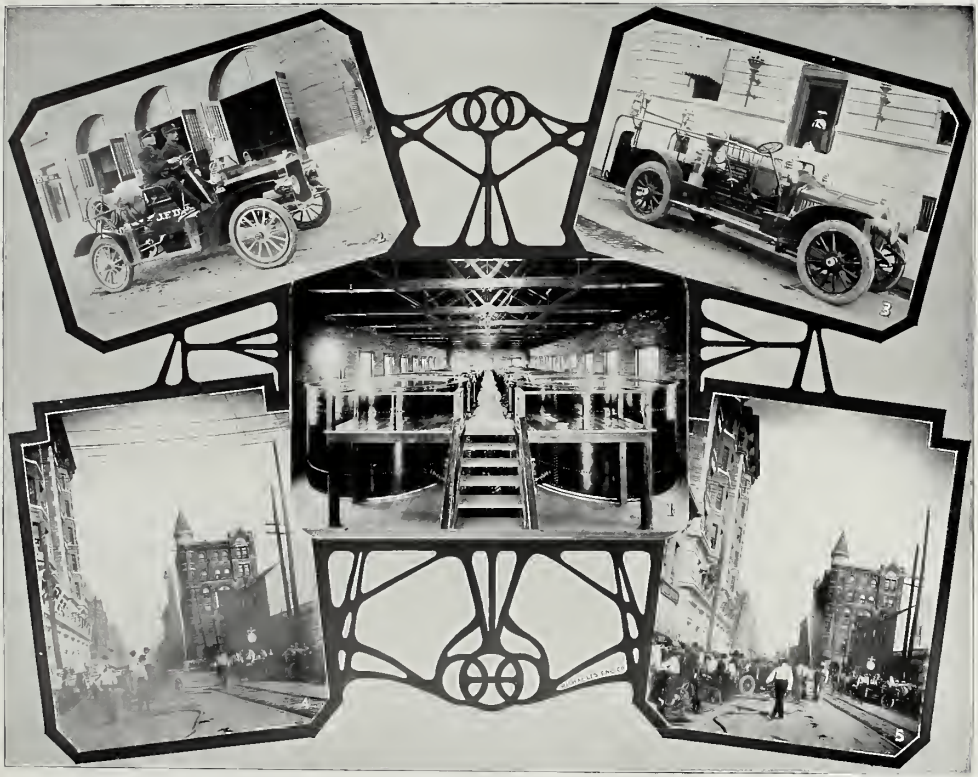
All Modern Conveniences.

JOPLIN AMUSEMENT PLACES.

1 Club Theater Building. 2. New Shubert Theater. 3. Theatorium Summer Theater. 4. Wasson's Vaudeville Theater. 5. Cunningham Park.

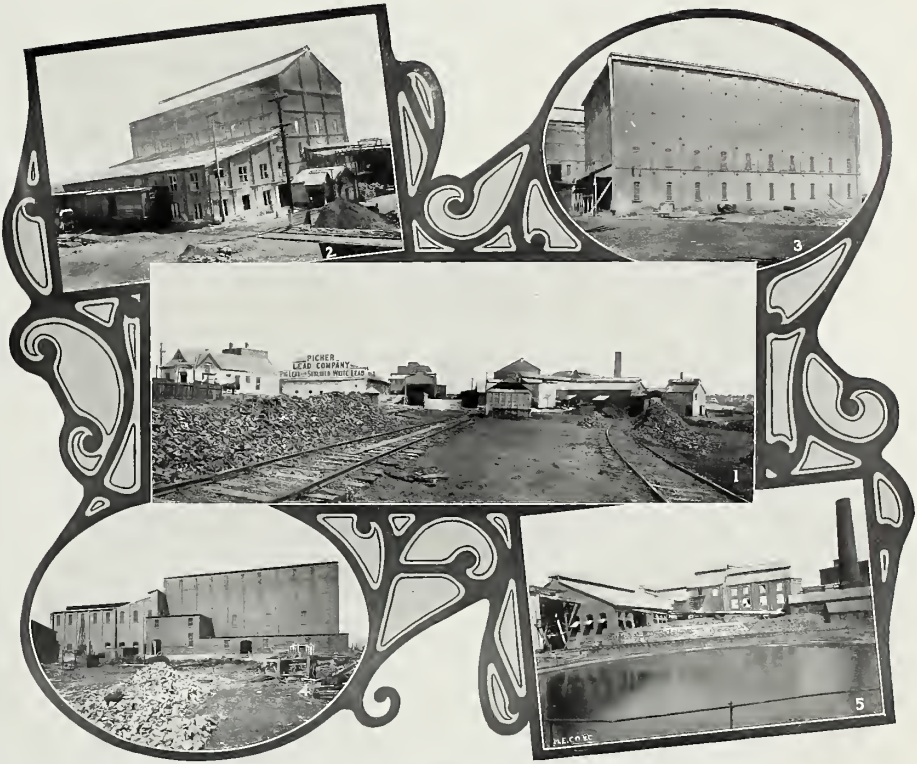
JOPLIN OUTDOOR SPORTS.

1. Shoal Creek and Grand Falls. 2. Western Association Baseball Park. 3 Bardee Park Race Track. 4. Country Club 5. Automobile Road Near Joplin

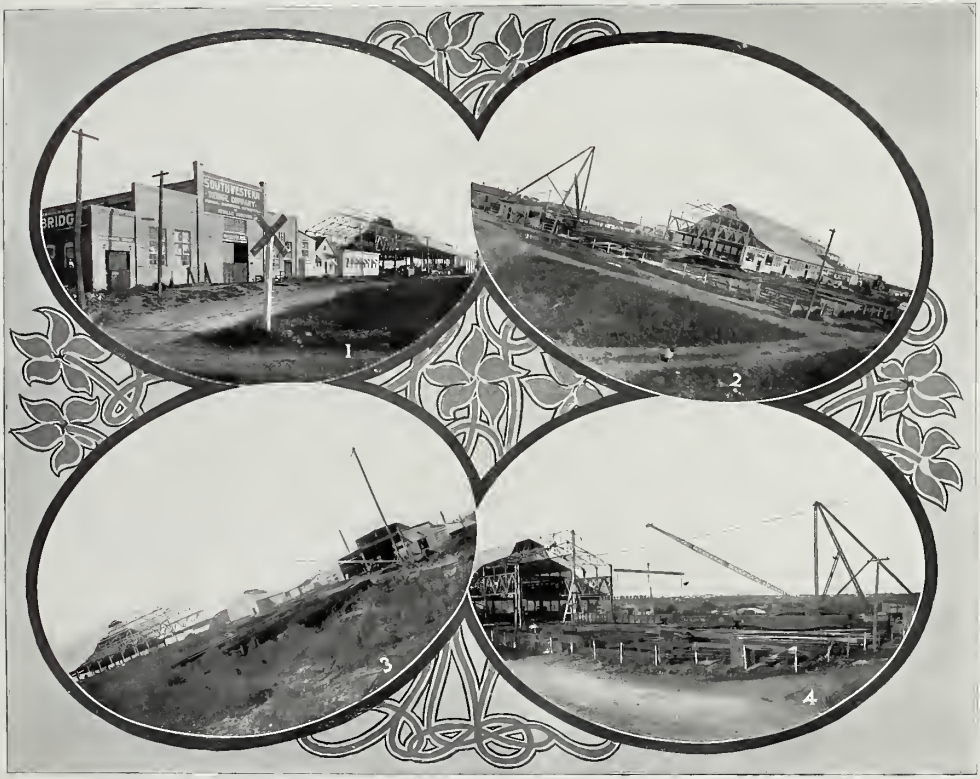


JOPLIN PUBLIC UTILITIES.

1. Filter Station Water Works Plant. 2. Fire Chief J. C. Sigars and Automobile Chemical Engine. 3. Automobile Fire Pump. 4-5. Automobile Fire Pump at Work.



WORKS OF PICHER LEAD COMPANY.



FOUR VIEWS SHOWING PLANT OF SOUTHWESTERN BRIDGE COMPANY, ENGINEERS, MANUFACTURERS AND CONTRACTORS FOR METALLIC STRUCTURES.

1. Home Office of Independent Powder Co. of Missouri, Joplin, Mo.
2. One of the Eight Large Independent Magazines Located in the Joplin-Webb City District.
3. Miners With Their "Independent" Waiting to Enter the Ground.
4. Six of the Acid Tanks at the Independent Works. These Tanks Hold $30,000.00 Worth of Acid.
5. Acid Recovery Plant, Independent Works. Capacity, 36,000 Lbs. Acid Daily.

AMERICAN CONCENTRATOR COMPANY, JOPLIN, MO., U. S. A.

READ THE SIGNS ON THE BUILDING, AND THEN SEND US YOUR INQUIRIES. OUR MACHINES ARE FAVORABLY KNOWN IN EVERY PROMINENT MINING DISTRICT IN NORTH AMERICA.

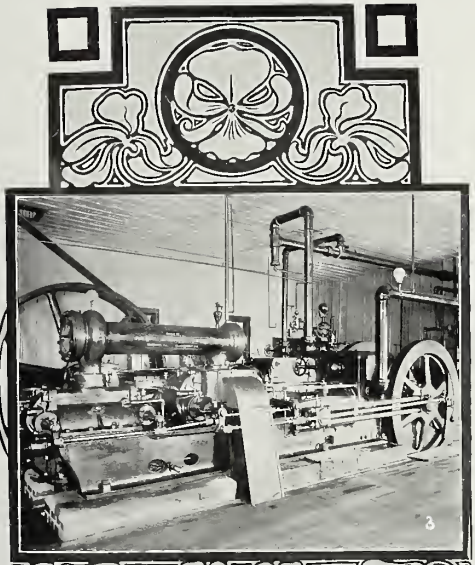
THE E. I. DUPONT DE NEMOURS POWDER CO.
MAIN OFFICE JOPLIN MINING DISTRICT AT JOPLIN, MISSOURI H. G. PACKER, MANAGER.

1. LIMESTONE BOULDER, THROWN OUT OF SHAFT NO. 23, AMERICAN Z., L. & S. CO. EIGHT SUMP HOLES SEATED 100 FEET FROM SURFACE, LOADED WITH 87 STICKS FORCITE POWDER. WEIGHT OF BOULDER DY MEASUREMENT, 12,352 POUNDS.
2. WEDB CITY OFFICE.
3. AURORA OFFICE.
4. JOPLIN OFFICE.
5. TYPICAL DYNAMITE STORAGE BUILDINGS.

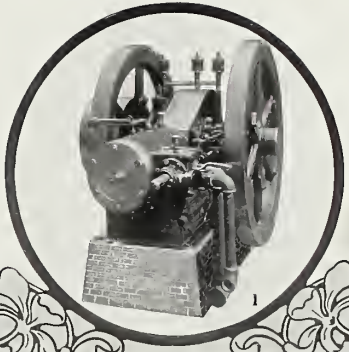
P. H. Brand, President.

BRAND-DUNWOODY MILLING CO., JOPLIN, MISSOURI. 600 BARREL DAILY CAPACITY.
W. B. Dunwoody, Vice-President.

J. F. Dunwoody, Secretary and Manager.



TYPICAL AIR COMPRESSOR INSTALLATION.
SULLIVAN COMPOUND AIR COMPRESSOR IN WEBB CITY SHEET GROUND MINING PLANT. FURNISHING COMPRESSED AIR FOR FIFTEEN CLASS U F 2 SULLIVAN DRILLS.



MINERS GAS ENGINE AND MFG. CO.
MANUFACTURERS OF HIGH GRADE GAS, GASOLINE, ALCOHOL, OIL, AND PRODUCER GAS ENGINES, MACHINE ROCK DRILLS, HOISTERS AND PUMPS.
FACTORY AND MAIN OFFICE, TENTH AND MAY STREETS, JOPLIN, MO., U. S. A.

COOLEY MANUFACTURING COMPANY, 410-412 PENNSYLVANIA AVE., JOPLIN, MISSOURI.

BEAUTIFUL HOMES OF THE PICHER FAMILY, JOPLIN, MISSOURI.

1. O. H. Picher. 2. O. S. Picher. 3. W. H. Picher.

SCHIFFERDECKER PLACE, JOPLIN, MISSOURI.

1. Residence of Charles Schifferdecker.
2. Gardner's Cottage.
3. Entrance, Schifferdecker Residence.

RESIDENCES AT JOPLIN, MISSOURI.

1. Edward Zellekeen.
2. E. O. Bartlett.
3. J. H. Dangerfield.

CHURCHES OF THE ZINC—LEAD DISTRICT.

1. First M. E. Church, Joplin, Mo. 2. Presbyterian Church, Webb City, Mo. 3. First M. E. Church, Carthage, Mo. 4. Saint Peters New Catholic Church, Joplin, Mo.

SCHOOLS OF THE ZINC-LEAD DISTRICT.

1. Joplin High School. 2. Carthage, Mo., High School. 3. Webb City, Mo., High School. 4. Galena, Kan., High School.

VIEWS OF WEBB CITY, MISSOURI.

1. Allen Street Looking South From Daugherty Street. 2. Joplin Street Looking West From Pennsylvania Avenue.
3. Pennsylvania Avenue Looking North From First Street.

WEBB CITY MISSOURI BUILDINGS.

1. Webb City, College Building. 2. New Blake Theater Building.
3. Y. M. C. A. Building.

A FEW WEBB CITY, MISSOURI, RESIDENCES.

1. Geo. H. Bruen.
2. W. E. Patten.
3. Col. James O'Neill.

A FEW WEBB CITY, MISSOURI, RESIDENCES.

1. J. A. Hardy, Jr.

2. J. A. Hardy, Sr.

3. Geo. Hardy.

THE NATIONAL BANK OF WEBB CITY, MISSOURI. CAPITAL $100,000.00

1. Banking Room. 2 Lobby.

3. Directors' Room.

THE SOUTHWEST MISSOURI RAILROAD COMPANY.

1. Double Track View. 2. Central Power Station, Webb City. 3. Shops and Car House, Webb City. 4. Car House, East Joplin. 5. Sub Power Station North of Oronogo.

THE FIRST NATIONAL BANK OF CARTERVILLE, MISSOURI.

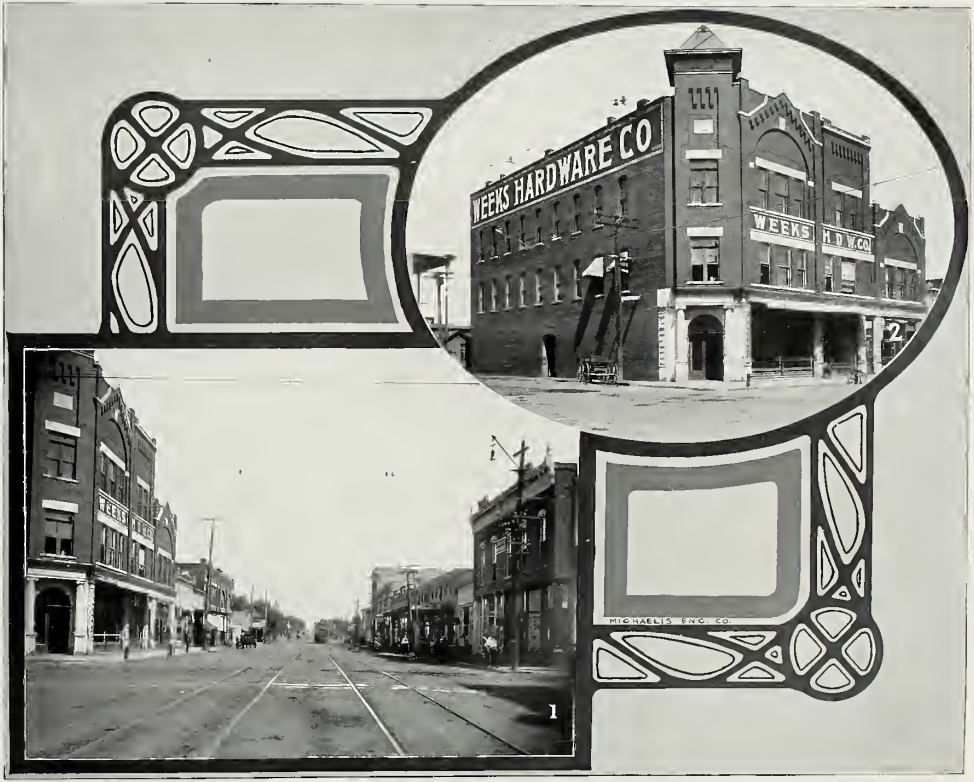
Capital, $100,000.

J. A. Daugherty, President.

G. P. Ashcraft, Vice-President.

Surplus, $25,000.

W. B. Kane, Cashier.



SCENES AT CARTERVILLE, MISSOURI

1. Main Street Looking East From Fountain Street.

2. Weeks Hardware Co.'s Building.

WEBB CITY AND CARTERVILLE FOUNDRY AND MACHINE WORKS. GENERAL OFFICES AND MAIN PLANT, WEBB CITY, MISSOURI.

1. Office Building. 2. Sheet Metal Works. 3. Foundry Building. 4. Machine Shop Building.

WEBB CITY AND CARTERVILLE FOUNDRY MACHINE WORKS. PLANT NO. 2 CARTERVILLE, MISSOURI.

1. Foundry and Office Buildings. 2. Machine Shop Building. 3. Pattern Shop Building.

CARTHAGE, MISSOURI. THE MOST BEAUTIFUL CITY IN THE DISTRICT.

1. View on Court House Square. 2. Carnegie Library. 3. Jasper County Court House. 4. Beautiful Cassil Place. 5. Ground Place.

1. Mount Hope Cemetery, Between Joplin and Webb City, Mo.

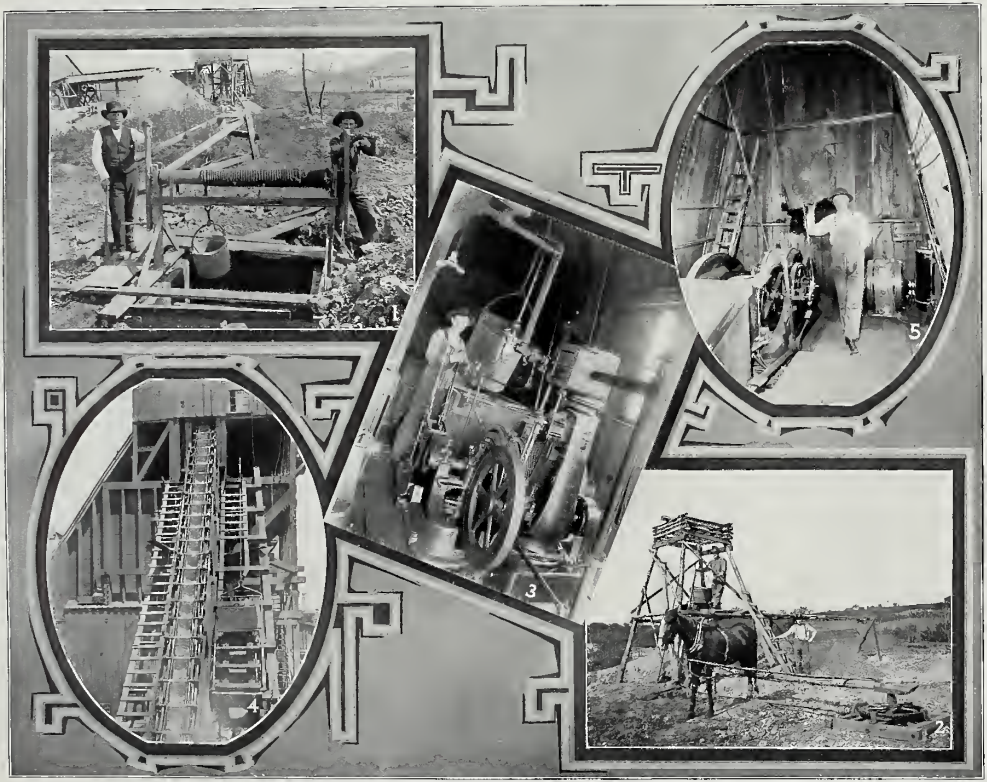
2. Lakeside Park, Between Webb City and Carthage, Mo.

VIEWS AT GALENA, THE METROPOLIS OF THE ZINC AND LEAD DISTRICT OF KANSAS.

1. Main Street Looking North From 7th Street.
2. City Hall.
3. Elks' Building (Under Construction).
4. First M. E. Church (Under Construction).

VIEWS OF THE QUAPAW INDIAN TRIBE AT BAXTER, KANSAS.

1. Chief Peter Clabber.
2. Quapaw Indian Tepee.
3 and 4. Quapaw Indian Tribe Assembled in Council March 5, 1907, Showing A. W. Adams, Secretary of the Tribe Standing at the Extreme Left, Who, Together With His Family, Own 1440 Acres of Mineral Land.



THE EVOLUTION OF HOISTING IN SOUTHWEST MISSOURI.

1. The Old Time Windlass, or "Armstrong" Hoister. 2. The "Hoss Hister." 3. Modern Steam Hoist. 4. The Incline Conveyor at the Yellow Dog Mine. 5. Modern Electric Hoister.

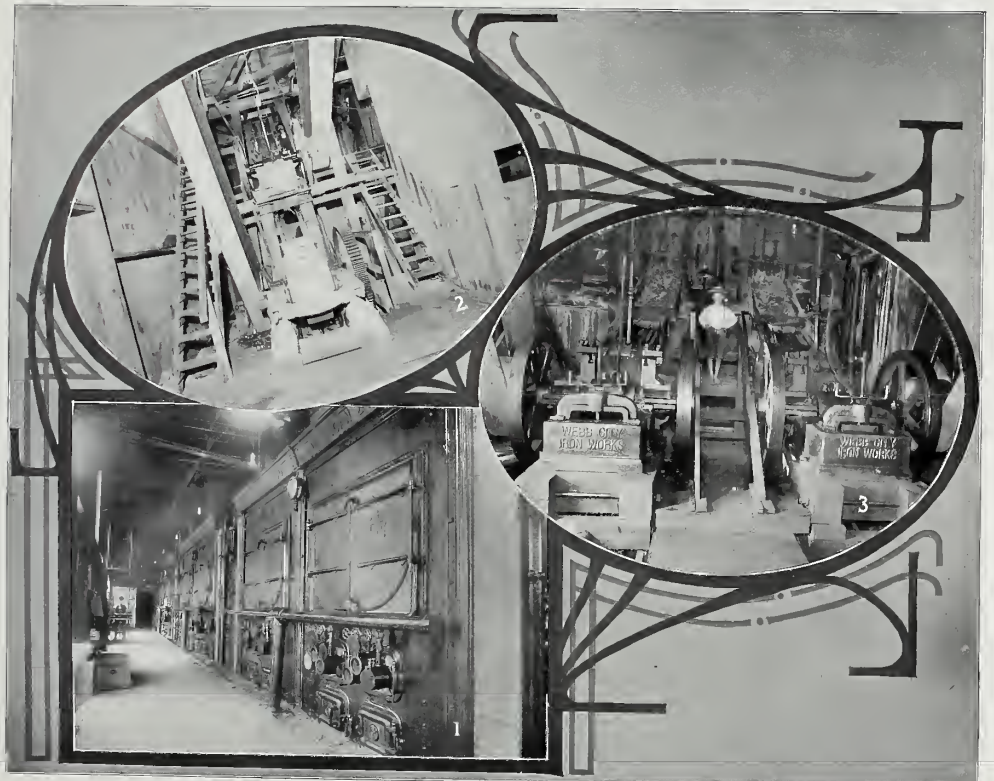
1. Lowering Men at the "Yellow Dog" Mine.
2. Men Descending in a "Tub."
3. The "Grizzly," which Separates the Large Boulders from the Fine Dirt.
4. View of Sheet Ground in the Rochester Mine, Carterville, Mo.

THE FOUR KINDS OF POWER APPLIED TO MINING.

1. Modern Gas Engine at the Washington Mine, Joplin, Mo.
2. Steam Engine at the Harbison Mine, Joplin, Mo.
3. Electric Motors of 800 Horse-power at the "Yellow Dog" Mine, Webb City, Mo
4. The Old-fashioned Hand Jig.

METHODS OF PUMPING.

1. Steam Pump at the Vantage Mines, Webb City, Mo. Capacity 5,000 Gallons per Minute. The Largest Pump in the District.
2. The Efficient Walking Beam Pump.
3. The Old-fashioned Tub Bailer.

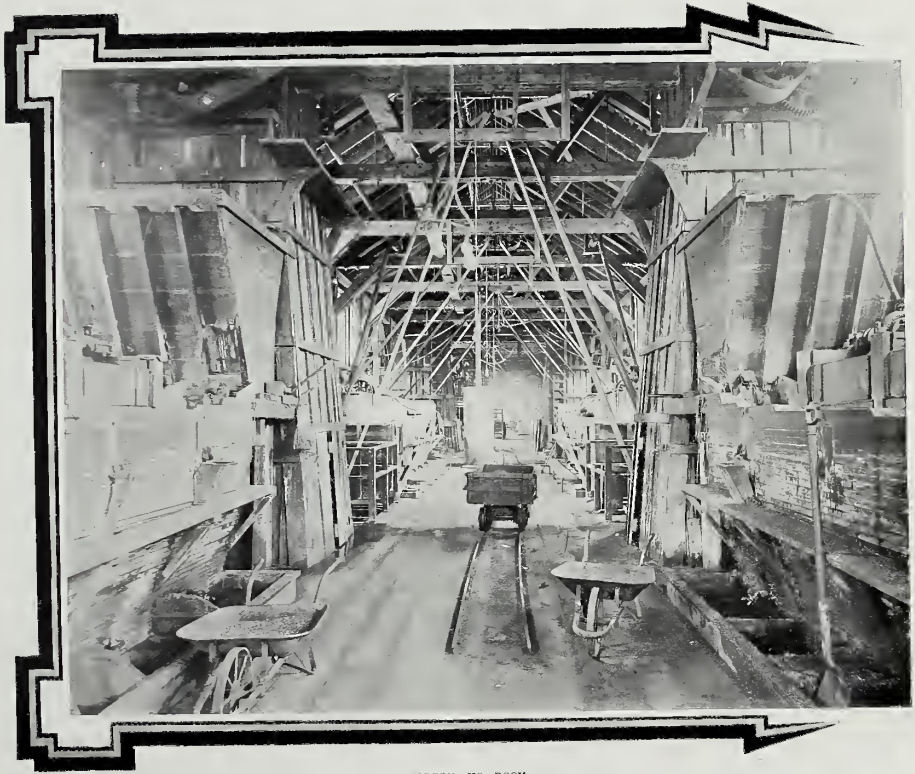


1. Boilers Equipped with Gas Burners at the Davey No. 3 Mine, American Z., L. & S. Co., Prosperity, Mo.

2. Hopper Feed, Ore Crusher and Rolls, "Good Samaritan" Mine, Porto Rico, Mo.

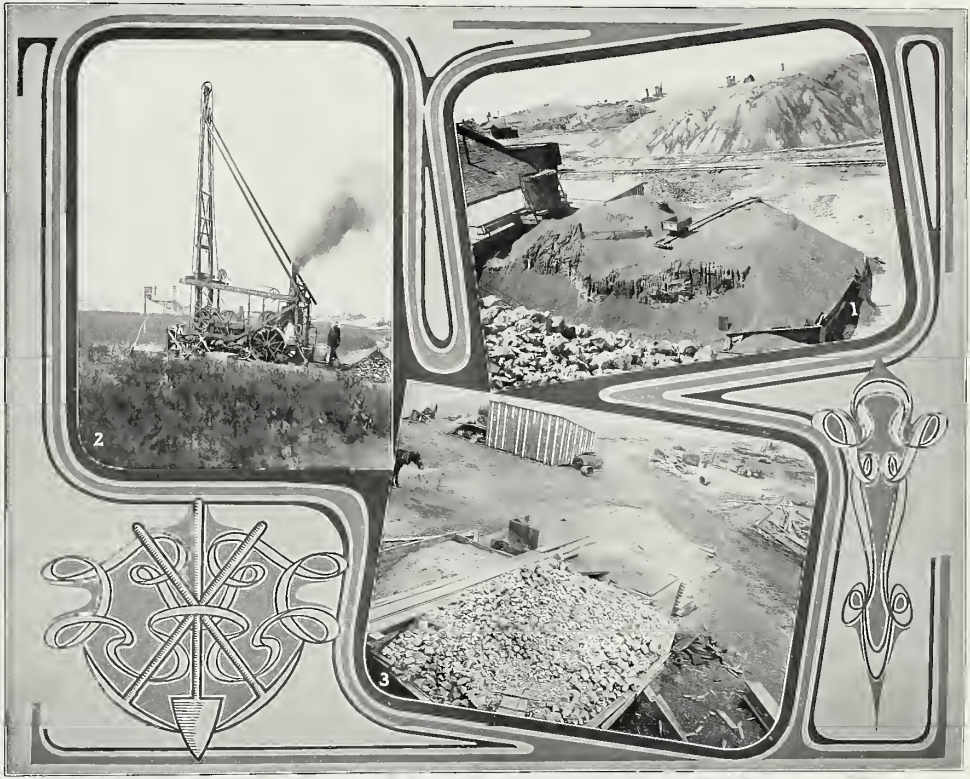
3. Hopper Feed and Ore Crushers at the Davey No. 3 Mine

1. Soft Ground Mining at Joplin, Mo. [These workings are exactly underneath the tracks of the K. C. So. Ry., and have caved in several times].
2. Heavily Timbered Ground Near Joplin, Mo.
3. A Large Hand Jig Plant, Suitable for Handling Soft Dirt.



MODERN JIG ROOM.

Interior of a Modern Jig Room, "Yellow Dog" Mine, Webb City, Mo.



1. One of the Largest Bins of "Jack" Ever Accumulated in the District; 1,500 Tons Valued at $75,000.00 at the Time, Mined on the Eleventh Hour Tract, Prosperity, Mo.
2. Modern Steam Drill in Operation.
3. One of the Largest Bins of Lead Ever Seen in the District; 500 Tons, Valued at $40,000. Located Prosperity, Mo.

Bird's-eye View of Mines in Joplin District.

Bird's-eye View of Mines in Webb City District.

Bird's-eye View of Mines at Porto Rico Tract.

Bird's-eye View of Mines at Carterville, Mo.

MISSOURI LEAD AND ZINC COMPANY, JOPLIN, MO.

1. President's Residence.
2. General View of Mill and Surroundings.
3. Interior View of Power House.

Missouri Lead & Zinc Company owns 1200 acres in one tract, mostly in the City limits and operates land for mining purposes, drains its land with an excellent pumping system.
Joplin Light, Power & Water Company, furnishing electric power and lights for customers anywhere in Joplin, and operates water works from a deep well.

VIEW OF THE ORIGINAL CHITWOOD FARM, NOW OWNED BY LEONARD REALTY CO.

1. General View—Peacock Valley.

Levi R. Greene, President.
Franklin Playter, Treasurer and General Manager.

4. Peacock Mine.

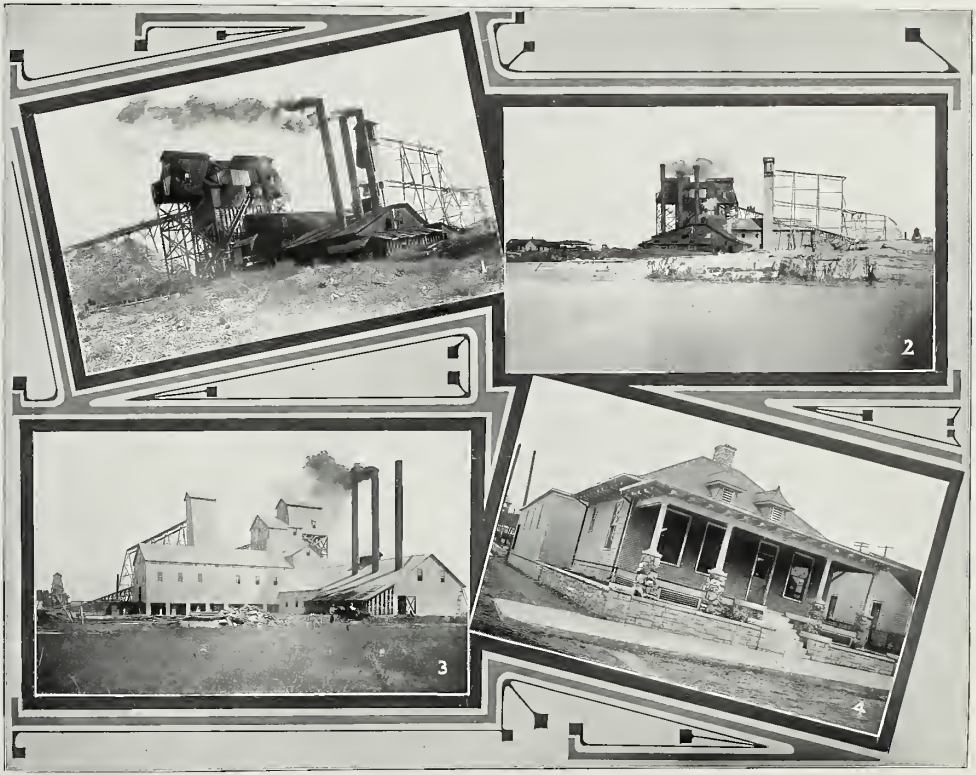
UNITED ZINC COMPANIES.
2. S. H. & S. (Old Mine).

C. C. Playter and Geo. H. Playter, Superintendents.

5. Northcutt Mine.

3. Thomas D. and S. H. & S.

Executive Offices:
803 Beacon Building, Boston.
Joplin, Mo. Aurora, Mo.

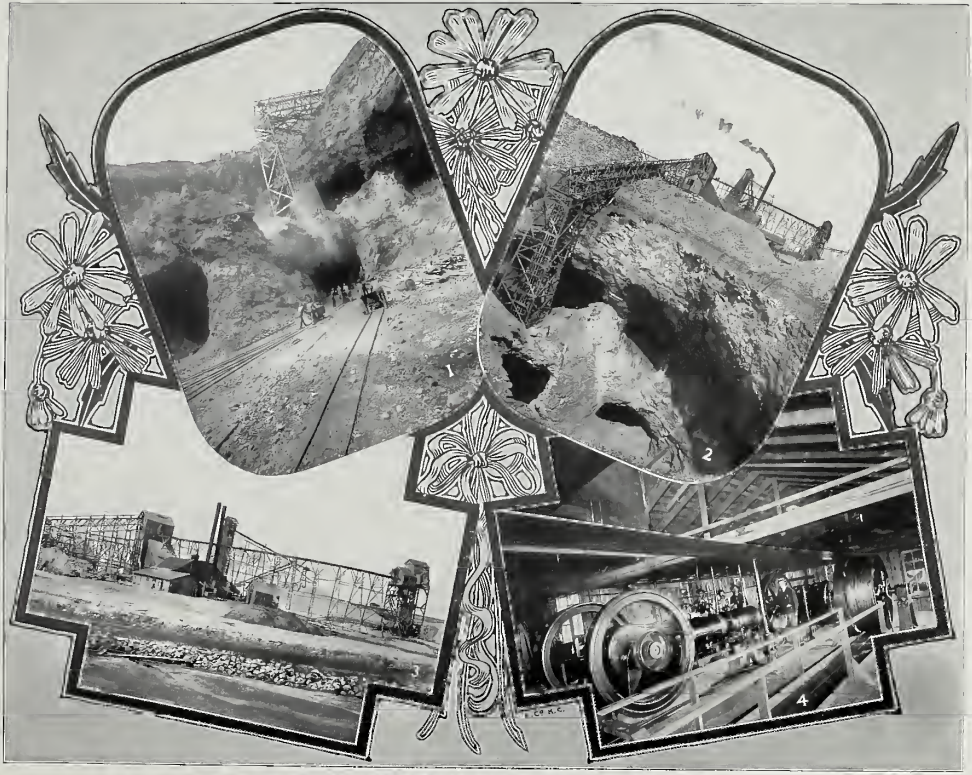


UNITED ZINC COMPANIES.

1. U. Z. No. 1.
2. U. Z. No. 1.
3. Highland, Duenweg.
4. Office, Joplin.

View of the New "Yellow Dog" Mill, the Largest in the District Capacity for Eight Hours Run, 1,000 Tons.

Chapman & Lennon, Red Dog Mine, Webb City, Mo., Producing $10,000.00 Monthly Profit.



THE BRADFORD & KANSAS CITY ZINC CO., JOPLIN, MO.

MINES AT WEBB CITY, MO.

E. Z. WALLOWER President.
A. H. ROGERS, Treasurer.
I. WARD FREY, Vice-Prest. and Asst. Treas.
D. C. WISE, Secretary.

F. C. WALLOWER, Manager.

BOARD OF DIRECTORS: E. Z. WALLOWER, I. WARD FREY, A. H. ROGERS, D. C. WISE, HALWOOD SCOTT, A. W. HOMPE, HENRY EBERWINE, CHARLES O. WOOD, GEORGE H. STAHL.

THE LITTLE PRINCESS MINING CO., WEBB CITY, MO.

LUCKY BUDGE MINING COMPANY, WEBB CITY, MMISSOURI.

1. Lucky Budge Mill, 350 Ton Capacity, Prosperity, Mo. 2. Burlington Mill, 200 Ton Capacity, Carterville, Mo. 3. Man-A-Tee Mill, 150 Ton Capacity, Carterville, Mo.

LEAD SMELTING AND REFINING WORKS OF THE HAMMAR BROS. WHITE LEAD CO., GALENA, KANSAS.
(Independent of all Combinations.)

AMERICAN ZINC, LEAD & SMELTING CO.

EASTERN OFFICE, 50 CONGRESS ST., BOSTON, MASS. GENERAL OFFICE, CARTERVILLE, MO.

H. S. KIMBALL, President. S. E. FARWELL, Treasurer. C. W. LANDRUM, Gen'l Manager.

1. DAVY NO. 1, CAPACITY 750 TONS DAILY. 2. DAVY NO. 2, CAPACITY 500 TONS DAILY. 3. DAVY NO. 3, CAPACITY 750 TONS DAILY. 4. DAVY NO. 4, CAPACITY 750 TONS DAILY.

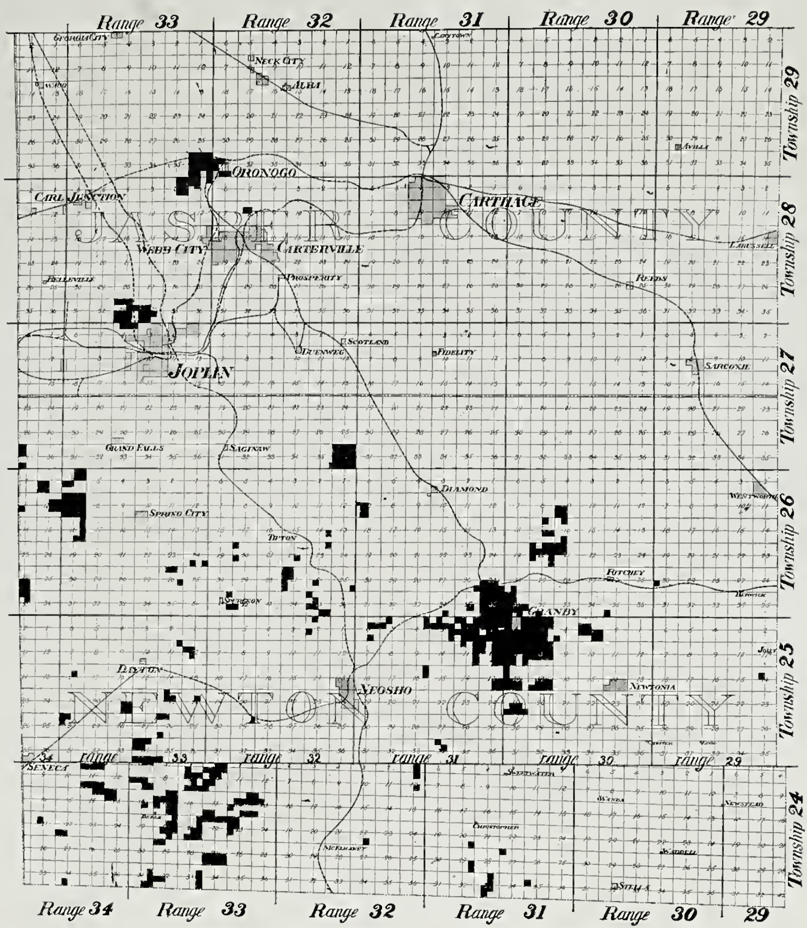
5. PANORAMIC VIEW OF AMERICAN COMPANY'S MINES AND LANDS, COMPRISING 500 ACRES OF SHELT GROUND IN THIS TRACT. BOTH LEAD AND ZINC ORE PRODUCED AT THESE MINES, EMPLOYING 600 MINERS.

AMERICAN ZINC, LEAD & SMELTING CO

Eastern Office, 50 Congress St., Boston, Mass.
H. S. Kimball, President.
1. Zinc Smelter at Caney, Kansas.

S. E. Farwell, Treasurer.
2. Zinc Smelter at Dearing, Kansas.

General Office, Caney, Kansas.
W. F. Rossman, General Manager.
Capacity 1000 Tons.



Lands of the Granby Mining and Smelting Company in Jasper and Newton Counties

GRANBY MINING & SMELTING CO., GRANBY, MO

1. Bird's-eye View of Granby Mining & Smelting Co.'s Land, Oronogo, Mo. 2. Smelter at Granby, Mo. 3. Bird's-eye View of Granby Mining & Smelting Co.'s Land Joplin, Mo.

LOUIS W. MINE, ELKING LEAD & ZINC COMPANY, WEBB CITY, MO.
CHICAGO OFFICE: 335 OLD COLONY BUILDING.

SOUTH SIDE MINING AND MANUFACTURING CO. GALENA, CHEROKEE COUNTY, KANSAS.

Zinc ore produced 1906, 9,259,930 lbs., value	$169,187.24
Lead ore produced 1906, 4,349,800 lbs., value	94,270.02
Total	$263,457.26

1. Stone Mill No. 3 and Crase Mining Co. Mill.
2. Pump Station and Deep Shaft No. 16.
3. Mill of L. D. Oliphant and Palmetto Mining Co.'s Mill.
4. Pump Station No. 17 and Black Jack Mining Co.'s Mill.

PROPERTIES OF MURPHY, FRIEL & CO. AND THE PRUDENTIAL MINING COMPANY, GALENA, KANSAS.

1. Missouri & Kansas Mill of the Prudential Mining Company, Galena, Kan., 100-Ton.
2. Alabama Coon Mill of the Prudential Mining Company, Galena, Kan., 150-Ton. Prudential ground has produced over $7,000,000 worth of ore and contains 150 acres.
3. Clara Louise Mill—on Bloomington Land.
4. Murphy, Friel & Co.'s Sludge and Tailing Mill, Capacity, 1,000 Tons Daily.

SOME MILLS ON BAXTER ROYALTY CO. GROUND.

1. Old Abe Mine, One of the Largest Producers and Best Developed Properties.
2. Pittsburg Mine, Where Ore is Mined by Open Cut.
3. Spring River Mine, Modern Mill Just Completed.
4. Kramer Mouse Mine, the Bonanza of the Camp.
5. Joanna, Noted for the Great Sheets of Lead Produced.

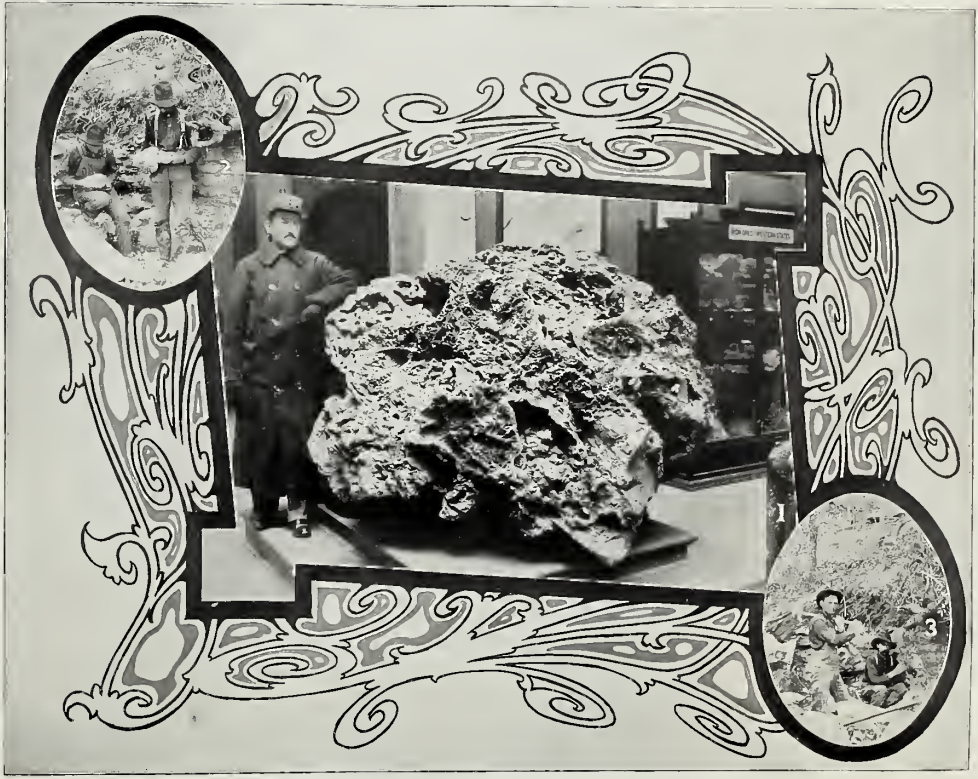
SUNBURST MINING CO., BAXTER, KANSAS.

1. Shaft No. 1, Sunburst Mining Co. 2. Shaft No. 3, Showing 2,000 Tons Rough Ore on Dump Ready for Milling. 3. Shaft No. 2, 500 Tons Crush Rock on this Dump. Location New Mill

MISSION MINING CO., BAXTER, KANSAS.

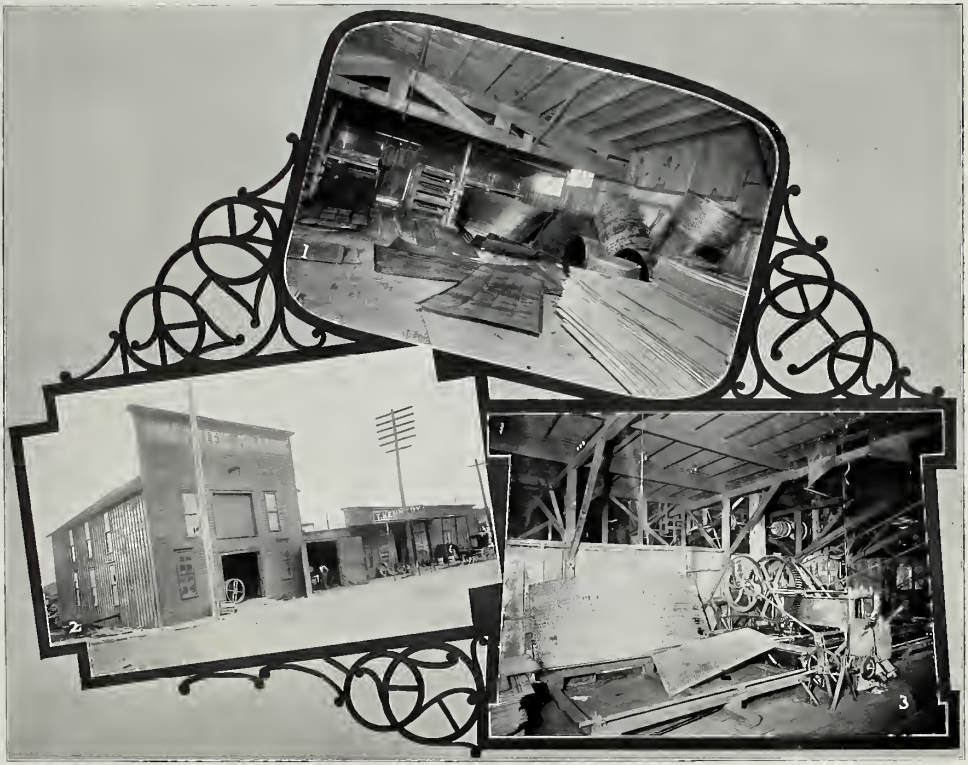
1. Mission Mill, the First Mill Built and Largest Producer in Baxter District. 2. Engine Room Showing Compressor Light and Power Plant.
3. Underground Station No. 1 Shaft, 72 Feet Level.

NATIONAL MINING & LEASING CO., PLAINFIELD, N. J., OPERATING LEAD AND ZINC MINES IN MISSOURI, KANSAS AND ARKANSAS, THREE MINES IN GALENA, KAN.
1. SUNBEAM PROPERTY. 2. CENTRAL MINE. 3. MARSHALL MILL.
In Morgan County, Mo., this company has forty acres of lead land, which is being subdivided and leased.



1. Largest Lump of Zinc Ore Ever Taken From any Mine. Weight, 12,500 Lbs. This Lump of Carbonate Zinc Ore Awarded First Premium World's Fair, Chicago, Taken From Morning Star Mine, Northern Arkansas. Now on Exhibition Field's Museum, Chicago.

2 and 3. National Mining and Leasing Co., Plainfield, N. J., Operating Lead and Zinc Mines in Missouri, Kansas and Arkansas. These Pictures Show Miners Taking Lead From Surface of the "Noted Lead Mine Tract," Boone County, Arkansas.

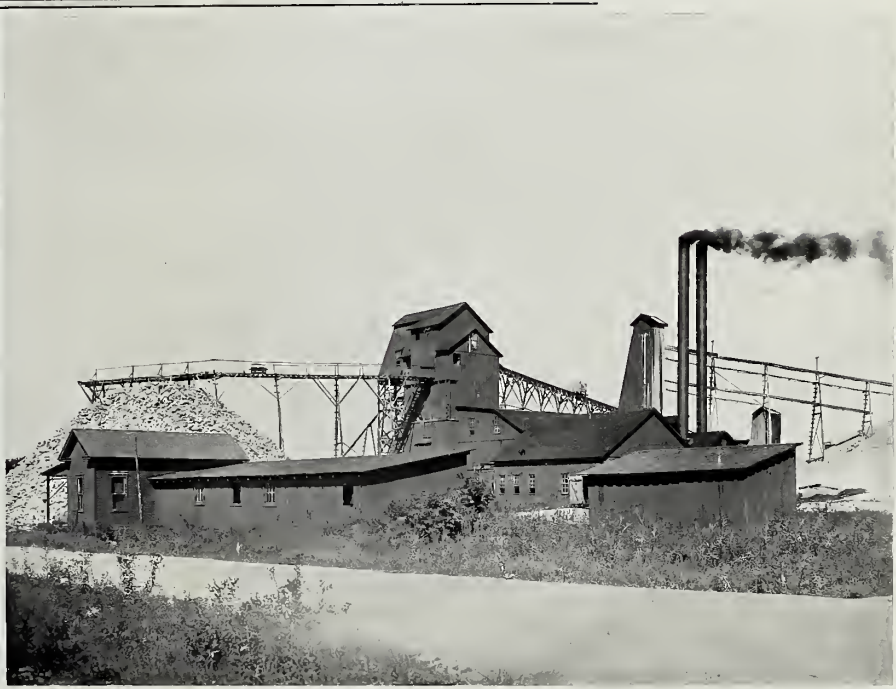


PERFORATING PLANT OF T. KENNEDY, GALENA, KANS.

MANUFACTURE OF PERFORATED METAL. THIS BUSINESS WAS ESTABLISHED IN 1892 AND HAS DEVELOPED WITH THE MINING INDUSTRY UNTIL IT IS NOW ONE OF THE LEADING MANUFACTURES IN THIS DISTRICT.
1. PART OF STOCK ROOM, SHOWING PERFORATED SHEETS OF VARIOUS SIZES AND PART OF STOCK OF 250 TONS OF BLANK SHEETS. 2. PERFORATING PLANT AND WAREHOUSES.
3. CORNER IN PUNCH ROOM, SHOWING ONE OF THE PERFORATING MACHINES AND SAMPLES OF THE WORK DONE. THE LARGE PERFORATED SHEET ON THE LEFT IS SIX BY TWELVE FEET.

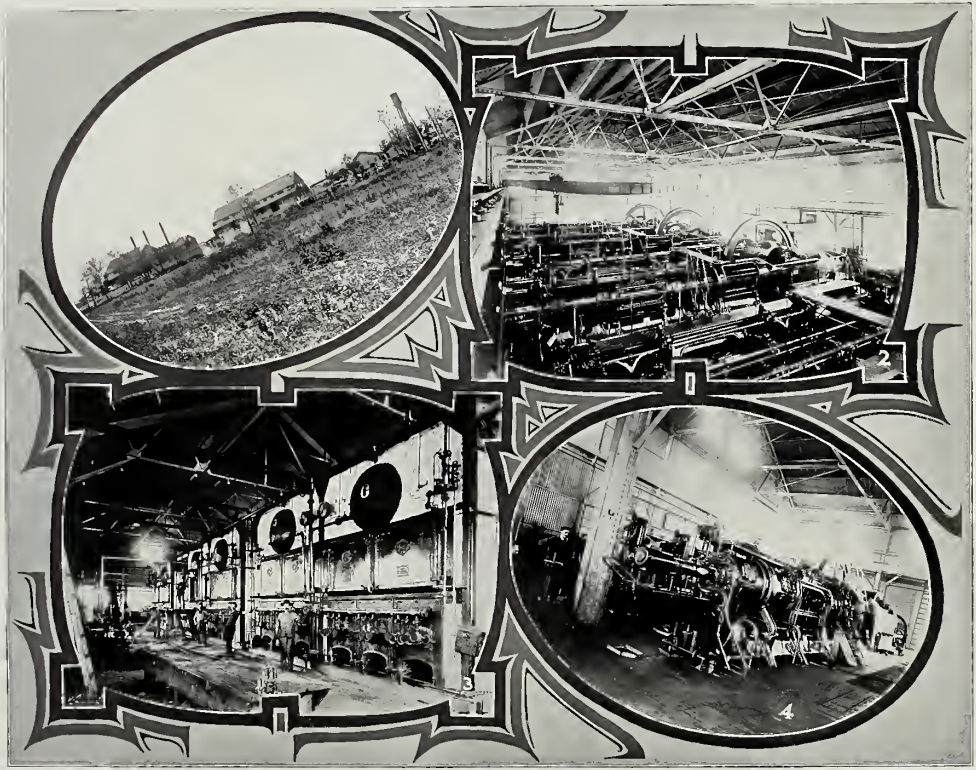
VIEWS AT SARCOXIE, MISSOURI.

1. Strawberry Field (14 Acres).
2. Optimo Mill, Speiner and McClellan.
3. McGowan Mine.
4. Plymouth Rock Mine.
5. C. Z. Camp, O. K. Mine.



COLEMAN BROS. CONCENTRATING PLANT, AURORA, MISSOURI.
Owned and Operated by M. L., J. W., U. L. Coleman, The Most Extensive and Successful Operators in the Aurora Camp.

SCENES FROM THE TWELVE GREAT WHITE LIMESTONE QUARRIES AT CARTHAGE, MISSOURI



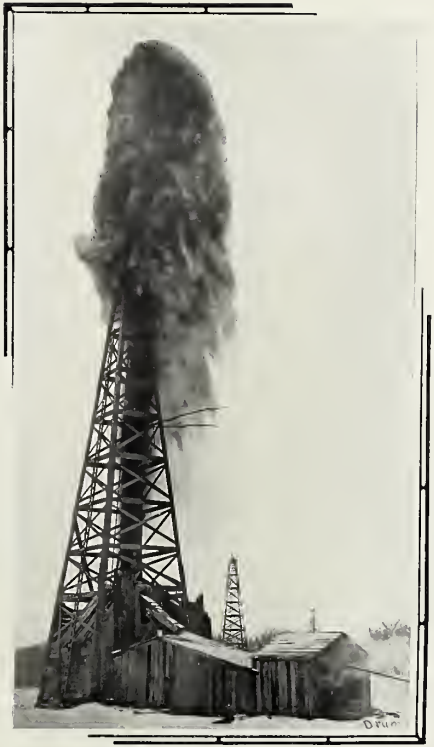
PETROLIA PUMPING STATION KANSAS NATURAL GAS CO.

1. General View of Plant.
2. Bird's-eye View Compressor Room, Six 1000-H. P. Gas Engine Driven Compressors.
3. Boiler Room.
4. One 1000-H. P. Compressor. All Gas Engine Driven Compressors

THE REMARKABLE BURNING GAS WELL AT CANEY, KAN.

This well was struck by lightning on February 23, 1906, as the last joints of pipe were being lowered. All efforts to cap the well were futile for a period of 35 days, during which time 2,000,000,000 cubic feet of gas were lost. The flame shown in the picture is 150 feet high.

Vast quantities of Kansas gas are consumed in the mining district of Missouri, Kansas and Oklahoma.



A "GUSHER" IN THE KANSAS OIL FIELDS NEAR CHANUTE, KAN.

MILLS ON THE NEWELL-MORSE COMPANY'S LAND, J. P. NEWELL, MANAGER.

1. HANSEL MILL NO. 1, CAPACITY 1,000 TONS (20 HOURS).
2. WINSLOW NO. 1, CAPACITY 400 TONS (20 HOURS).
3. WINSLOW NO. 2, CAPACITY 700 TONS (20 HOURS).
4. SHELFRED NO. 1, 1000 TONS (20 HOURS).

MILLS ON THE TRINITY ZINC, LEAD & SMELTING COMPANY'S LAND, J. P. NEWELL, MANAGER, CARTHAGE, MISSOURI.

1. Trinity Mill No. 1, Capacity 1400 Tons (20 Hours).
2. Whitsett Mill, Capacity 600 Tons (20 Hours). Operated by Old Dominion Mining Co.
3. Little Minister Mill, Capacity 600 Tons (20 Hours).
4. San Gabriel Mill on Jasper County Royalty Co.'s Land, J. P. Newell Mgr., 1000 Tons (20 Hours).

OLD DOMINION MINING COMPANY, JOPLIN, MISSOURI.

1. Talisman Mine, Carterville, 500 Tons Capacity, Double Shift. 2. Whitsett Mine, Porto Rico, 600 Tons Capacity, Double Shift.
3. Iroquois Mill, Joplin, 300 Tons Capacity, Double Shift.

C. M. Sheldon, President. Chas. Knabb, Vice-President. Executive Offices, Childs Bldg., New York City.

DIRECTORS:—Chas. Knabb, President First National Bank, Hiawatha, Kansas; Grant Hornady, President First National Bank, Fort Scott, Kansas; Robert Scott, Cashier First National Bank, Wamego, Kansas; Benj. Schnierle, President Wyandotte State Bank, Kansas City, Kansas; James S. Cunningham, President Knoxville National Bank, Knoxville, Iowa; C. M. Sheldon, formerly President First National Bank, Burlingame, Kansas.

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